

ABSTRACT

The filter catalyst for purifying exhaust gases having a catalytic layer comprising the first catalyst support 2 having an average particle diameter of $1 \mu\text{m}$ or less, the second catalyst support 3 having an average particle diameter from $1/20$ to $1/2$ of the average pore diameter of the filter cellular walls 12 and catalytic ingredients, on the filter cellular walls 12 having an average pore diameter of from 20 to $40 \mu\text{m}$, and the catalytic layer having uneven surfaces is used. Since the second catalyst support hardly enters into the pore with a diameter of $20 \mu\text{m}$ or less, it exists partly on the filter cellular walls and the inside surface of the wall. Therefore, since PMs collide with the convex part of the catalytic layer, it becomes possible to collect them easily and the collecting rate for PMs and the ability of PMs purification are improved.